

### ABSTRACT OF THE DISCLOSURE

The present invention provides an arrayed waveguide such that each waveguide of the grating has a substantially uniform width, but the width of any single waveguide in the grating is selected based on a predetermined birefringence required for the waveguide. Generally, the narrowest grating waveguide has the longest overall length and the widest grating waveguide has the shortest overall length. The remaining intermediate waveguides have widths that are interpolated between the narrowest and widest waveguide gratings. With an appropriate width for each waveguide, an arrayed waveguide grating is provided that has low polarization dependent wavelength.

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